



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,063	05/26/2006	Sadahiko Yasukawa	70404.95/ha	1393
54/072 7590 06/23/2009 SHARP KABUSHIKI KAISHA C/O KEATING & BENNETT, LLP 1800 Alexander Bell Drive SUITE 200 Reston, VA 20191				
EXAMINER				
PATEL, PREMAL R				
ART UNIT		PAPER NUMBER		
2629				
NOTIFICATION DATE		DELIVERY MODE		
06/23/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM  
uspto@kbiplaw.com

# Office Action Summary

**Application No.**

10/596,063

**Applicant(s)**

YASUKAWA, SADAHIKO

**Examiner**

PREMAL PATEL

**Art Unit**

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 April 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-20 is/are pending in the application.  
4a) Of the above claim(s) 17 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 11-16 and 18-20 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 26 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of **Species 2** in the reply filed on **April 23, 2009** is acknowledged.
2. **Claim 17** is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a **nonelected Species**, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on **April 23, 2009**.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 11, 13, 15, 16, 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohno et al. (6,239,788) in view of Colgan et al. (6,057,903).

Regarding **claim 11**, Nohno teaches a display system, which includes a display device (**Fig 1**) and a device provided on a display section of the display device and having one or more conductive thin plates (**Fig 1**), said display system comprising: a display device driving section (40; **Fig 1**) arranged to drive the display device (**Column 12, lines 16-30**); and a signal application section (38; **Fig 1**) arranged to apply, to the device having the one or more conductive thin plates (**Fig 1**).

Nohno fails to teach a noise canceling signal having an amplitude and a phase that are equal with an amplitude and a phase of a driving signal applied from the display device driving section to the display device; as claimed.

Colgan teaches a liquid crystal display device wherein a noise canceling signal having an amplitude and a phase that are equal with an amplitude and a phase of a driving signal applied from the display device driving section to the display device (**Column 1, lines 60-67**).

It would have been obvious to one of ordinary skill in the art at the time of invention to have modified display device of Nohno with applying the signal with same amplitude and phase as taught by Colgan, because this will result in substantially reducing the effective capacitance to ground of the resistive touch surface (Colgan: **Column 1, lines 60-65**).

Regarding **claim 13**, Nohno further teaches the display system, wherein the device having the one or more conductive thin plates is an input device arranged to detect a position via which information is inputted from outside (**Column 14, lines 21-32**).

Regarding **claim 15**, Nohno further teaches the display system, wherein the input device includes: an input device control section (36; **Fig 1**) to which a detection signal to detect a position via which information is inputted from outside to the conductive thin plate (**Column 13, lines 46-64**); and a signal switching section (39; **Fig 1; Col 12, lines**

**31-41)** arranged to select either the noise canceling signal or the detection signal so as to input the selected signal to the conductive thin plate.

Regarding **claim 16**, Nohno further teaches the display system, wherein the signal switching section switches the noise canceling signal to the detection signal or switches the detection signal to the noise canceling signal in accordance with whether or not information is inputted from outside to the conductive thin plate (**Column 12, lines 31-41; Column 13, lines 14-45**).

Regarding **claim 19**, Nohno and Colgan further teaches the display system, wherein the display section of the display device is a liquid crystal panel (Nohno: 31; **Fig 1**) which has two substrates (Nohno: **Column 12, lines 51-64**) and liquid crystal provided between the two substrates (Nohno: **Column 12, lines 65-67**), and the noise canceling signal has an amplitude and a phase that are equal to an amplitude and a phase of a driving signal which influences electric charge existing between the liquid crystal panel and the one or more conductive thin plates (Colgan: **Column 1, lines 60-67**) (**Note:** As cited above Nohno teaches the display device as described above and Colgan teaches the noise cancelling signal as cited. It will be obvious that upon applying the signal will influence electric charge existing between the liquid crystal panel and the conductive thin plates).

Regarding **claim 20**, Nohno and Colgan further teaches the display system, wherein the display section of the display device is a liquid crystal panel (Nohno: 31; **Fig 1**) which has two substrates (Nohno: **Column 12, lines 51-64**) and liquid crystal provided between the two substrates (Nohno: **Column 12, lines 65-67**), a thin film transistor (44; **Fig 1**) is provided on a substrate of the two substrates which is positioned further from the one or more conductive thin plates, and the noise canceling signal has an amplitude and a phase that are equal to an amplitude and a phase of a driving signal applied to a substrate of the two substrates which is positioned closer to the one or more conductive thin plates (Colgan: **Column 1, lines 60-67**) (**Note:** As cited above Nohno teaches the display device as described above and Colgan teaches the noise cancelling signal as cited. It will be obvious that upon applying the signal will influence electric charge existing between the liquid crystal panel and the conductive thin plates. Further when the noise cancelling signal is applied to a plate, it reduces the noise).

5. **Claims 12 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohno et al. (6,239,788) in view of Colgan et al. (6,057,903) as applied to claim 11 and 13 above, and further in view of Takahata et al. (2004/0239641).

Regarding **claims 12 and 14**, Nohno and Colgan teaches the display system, wherein the noise cancelling signal is applied to at least a conductive thin plate which is located to the thin plate which is located closed to the display section of the display

device as explained above for claims 11 and 13 above. (**Note:** When the noise cancelling signal is applied to a plate, it reduces the noise).

Nohno and Colgan fail to teach two conductive thin plates overlapping each other; as claimed.

Takahata teaches a touch panel comprising two conductive thin plates overlapping each other (plate 1, plate 3; **para [0031]; para [0009]; para [0015]**).

It would have been obvious to one of ordinary skill in the art at the time of invention to have modified display device of Nohno and Colgan with structure of conductive plates as taught by Takahata, because this would provide high-durability touch panel.

6. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Nohno et al. (6,239,788) in view of Colgan et al. (6,057,903) as applied to claim 15 above, and further in view of Yamazaki (2003/0011583).

Regarding **claim 18**, Nohno and Colgan teaches the display system as explained above for claim 15 (**Note:** As explained above Colgan teaches the noise cancelling signal)

Nohno and Colgan fail to teach the system further includes a conversion circuit arranged to convert an amplitude; as claimed.

Yamazaki teaches a display device comprising a conversion circuit (level shifter 356; **Fig 5**) arranged to convert an amplitude of a signal (**para [0133]**). (**Note:** Examiner is

only relying on the teaching of Yamazaki where it describes the level shifter to amplify the signals).

It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the display system of Nohno and Colgan with the level shifter as taught by Yamazaki, because this combination will result in achieving reduced power consumption while restraining the degradation in display quality at the same time (Yamazaki: **para [0027]**).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Pepper, Jr. (4,371,746); Roberts (2002/0180710); Flowers (6,882,338); Colgan et al. (6,204,897); Colgan et al. (6,177,918) and Yamashita (2003/0107556).**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREMAL PATEL whose telephone number is (571)270-5892. The examiner can normally be reached on Monday to Friday, 6:30 to 4:00, with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571)272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. P./  
Examiner, Art Unit 2629

/Amare Mengistu/  
Supervisory Patent Examiner, Art Unit 2629